



Neighborhood Street Traffic Calming Toolkit

NDOT’s neighborhood street traffic calming approach is comprised of three different types of traffic calming treatments: pinch points, surface treatments, and intersections. Each of these types has a portfolio of treatments that can be appropriate for different contexts, from quiet neighborhood streets to busier roads. There are constraints for each, whether it be the street’s geometry, posted speed limit, or the number of cars on the street. Each individual treatment has advantages and disadvantages for reducing speeds and impacting access for bicyclists, transit vehicles, parking, and emergency vehicles.

Drivers generally drive at a speed that feels safe. That means that streets that were designed to be straight, wide, and clear encourage drivers to drive fast, regardless of the posted speed limit. Streets and lanes must be straight enough to keep cars in the street, wide enough to allow vehicles to pass one another, and clear enough to avoid crashes. Any extra space beyond that encourages people to drive fast. The tools in the NSTC toolbox are intended to challenge existing design conditions on streets that are encouraging high speeds.



Pinch Points

Pinch points are all treatments that narrow the street, in specific locations or for many blocks of a corridor. Making the street feel narrower makes drivers pay closer attention and drive slower.



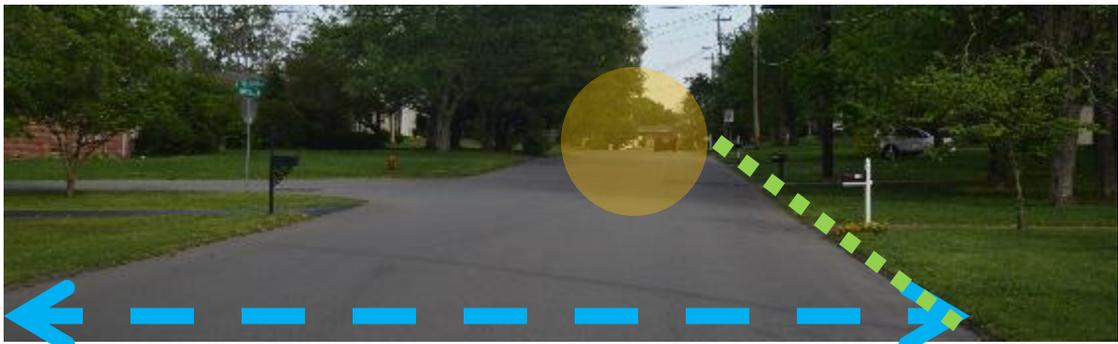
Surface Treatments

Surface treatments refer to raising the street surface in specific locations, at regular intervals. Doing so is very effective at reducing speeds, and calls attention to things like pedestrian crossings.



Intersections

Treating intersections can reduce turning speeds, but is most effective at keeping cut-through traffic off of neighborhood streets, and improving crossings for pedestrians and bicyclists.



Clear, straight, and wide streets encourage high speeds.

Toolkit

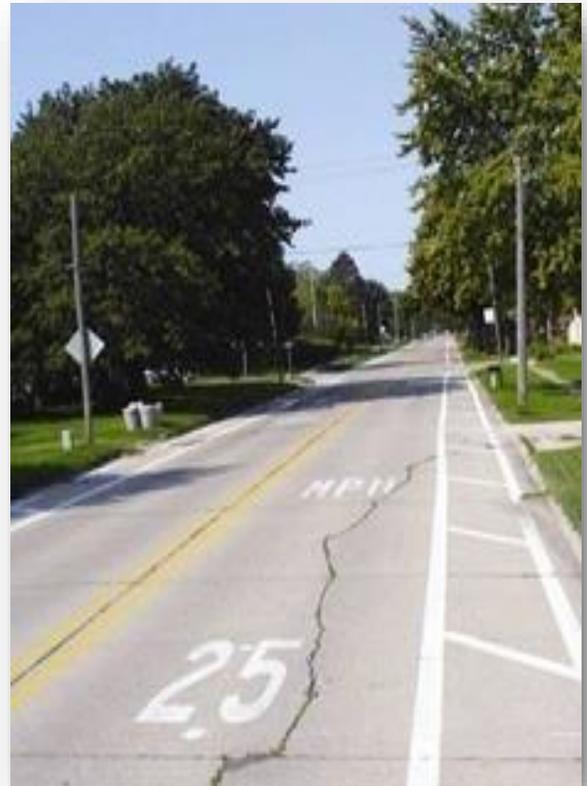
Pinch Points - Narrowing

Description:

Wider streets and lanes encourage people to drive faster. An easy and cost-effective solution is to narrow lanes and the street. This can simply be done with paint, or depending on the excess space, it can be an opportunity to create an unmarked area for pedestrian, bike, or other use. Narrowing requires a wide street.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	●
Speed Reduction	◐
Traffic Diversion Impact	◐
Noise Impact	◑
Pedestrian Benefit	●
Bicycle Benefit	●
On-street Parking Impact	◐
Emergency Response Impact	●



Advantages:

- Relatively low cost
- Quick implementation
- Safety benefit (if striping not currently present)

Disadvantages:

- Relatively low speed impact
- Ongoing maintenance costs
- Could impact street parking

Toolkit

Pinch Points - Medians

Description:

Another method of narrowing, medians reduce the width of lanes and the street, causing drivers to slow down. Medians also remove the risk of head-on collisions. This can simply be done with paint, removable medians, and/or flexible delineators. Medians require a street to be wide enough to maintain adequate travel lanes after installation.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	●
Speed Reduction	◐
Traffic Diversion Impact	◐
Noise Impact	○
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐

● High ◐ Moderate
◑ Minimal ○ None



Advantages:

- Effective in reducing speeds
- Could reduce risk of head on collisions

Disadvantages:

- Generally, reduces access/requires U-turns for driveways
- May reduce parking

Toolkit

Pinch Points – Bulb Outs

Description:

Wide streets often results in wider than necessary intersections. Bulb outs are an effective way to narrow these intersections to reduce the crossing distance for pedestrians and reduce the speed of turning vehicles. These measures can be created using paint markings and flexible delineators. Bulb outs require large intersections with a large turning radii.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	●
Speed Reduction	◐
Traffic Diversion Impact	◐
Noise Impact	○
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐

● High ◐ Moderate
◑ Minimal ○ None



Advantages:

- Effective in reducing turning speeds
- Typically, no impact on parking
- Reduces crossing distance for pedestrians

Disadvantages:

- May impact bicycle lanes

Toolkit

Description:

Speed radar signs provide real-time speed feedback to drivers and can show your speed in red above the speed limit. Speed radar signs work best on streets where driver's naturally increase speed by calling awareness to the posted speed limit.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	●
Speed Reduction	◐
Traffic Diversion Impact	⌚
Noise Impact	⌚
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	⌚
Emergency Response Impact	⌚



Advantages:

- Provide real time feedback to drivers
- No impact on physical street

Disadvantages:

- Drivers have the option to ignore feedback

Surface Treatments– Speed Cushions

Toolkit

Description:

Speed cushions slow traffic by creating a vertical deflection in the roadway. Speed cushions provide gaps in between so that larger transit/emergency vehicles with wide wheelbases can avoid max vertical deflection zones. Speed cushions come in three different lengths, 7', 10.5' or 14'. The posted speed limit must be <=30 MPH and the daily volume must be under 5000 vehicles to qualify.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	◐
Speed Reduction	●
Traffic Diversion Impact	◐
Noise Impact	◐
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐



Advantages:

- Very effective in reducing speeds
- Minimal impact on emergency vehicles

Disadvantages:

- Only applicable to streets with a desired speed of 30 MPH or less

Toolkit

Description:

Speed tables slow traffic by creating a vertical deflection in the roadway. Speed tables have a trapezoidal shape with a flat section in the middle and ramps on the end. The long flat design allows cars to pass without slowing as significantly as with the shorter 7' or 10.5' speed cushions. The posted speed limit must be ≤ 30 MPH and the daily volume must be under 5000 vehicles to qualify.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	◐
Speed Reduction	●
Traffic Diversion Impact	◐
Noise Impact	◐
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐



Advantages:

- Very effective in reducing speeds
- Will not require vehicles obeying speed limit to slow

Disadvantages:

- May conflict with bus routes
- May impact emergency vehicles

Toolkit

Description:

Traffic circles are raised islands placed into the center of existing intersections. Circles allow drivers to yield rather than stopping, leading to a smoother traffic flow. Navigating the circle also results in slower speeds and more awareness by drivers. Traffic circles also significantly decrease the possibility for head-on and T-bone collisions.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	◐
Speed Reduction	◐
Traffic Diversion Impact	◐
Noise Impact	○
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐



Advantages:

- Improved safety and efficiency
- Opportunity for greenery in the street
- Reduces possibility for head-on collisions

Disadvantages:

- May require bicyclists to merge with vehicles
- May be difficult or impossible for larger vehicles to maneuver

Toolkit

Pinch Points - Chicanes

Description:

Chicanes create a meandering roadway by introducing slight curves that force drivers to pay more attention, while also narrowing lanes and the street. The narrowing can be achieved with simple paint or curbing. Chicanes are an effective solution for addressing speeding on overly straight and wide roads.

Fast Facts:

Local Street Applicability	●
Collector Street Applicability	◐
Speed Reduction	◐
Traffic Diversion Impact	◐
Noise Impact	◐
Pedestrian Benefit	◐
Bicycle Benefit	◐
On-street Parking Impact	◐
Emergency Response Impact	◐



Source: <https://www.nycstreetdesign.info/geometry/chicane>

Advantages:

- Effective in reducing speeds
- Very cost effective
- Opportunities for greenspace/parking

Disadvantages:

- May require additional maintenance
- Cause pedestrians/bicyclists to merge with vehicular traffic at points
- May affect street parking